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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,938	09/24/2003	Achintya K. Bhowmik	ITL.1014US (P16650)	4613
21906	7590	11/28/2005	EXAMINER	
TROP PRUNER & HU, PC 8554 KATY FREEWAY SUITE 100 HOUSTON, TX 77024			DUPUIS, DEREK L	
			ART UNIT	PAPER NUMBER
			2883	

DATE MAILED: 11/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/669,938	Applicant(s) BHOWMIK, ACHINTYA K.	
	Examiner Derek L. Dupuis	Art Unit 2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/16/2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.



Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see page 4, filed 9/16/2005, with respect to the objection to the drawings, the objection to the specification, and the rejection of claims 9-12 under 35 U.S.C. 112 have been fully considered and are persuasive. The objection to the drawings, the objection to the specification and the rejection of claims 9-12 under 35 U.S.C. 112 have been withdrawn.

2. Applicant's arguments filed 9/16/2005 regarding the rejection of claims 1-15 under 35 U.S.C. 102(e) have been fully considered but they are not persuasive. Applicant argues that the dispersion compensator is a "fixed" compensator and is therefore, not tunable. However, paragraphs 50-52 clearly teach that the dispersion compensator is tunable and that the amount of dispersion compensation can be directly tuned based upon feedback voltage control. Chien teaches that the amount of compensation can be "lowered" which shows that the compensation level is in fact "tuned" as claimed by applicant.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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4. Claims 1-15 are rejected under 35 U.S.C. 102(e) as being anticipated by *Chien et al (US 2002/0168165, hereinafter "Chien")*.

5. Regarding claims 1-8, Chien teaches a method comprising identifying a first and a second non-zero amount of dispersion in an optical system and applying stress to an optical medium to provide a desired dispersion compensation to the first non-zero amount of dispersion and tuning the stress to compensate for the second amount of non-zero dispersion. As discussed in paragraph 41, Chien teaches that a first amount of dispersion can be compensated, and then, based on feedback a second amount is detected and the system is tuned accordingly. This method is further explained in paragraphs 50-52.

Chien also teaches generating a corrective dispersion of the opposite polarity of a dispersion inducted in the optical medium; using piezoelectric devices to generate stress in the optical medium; controlling the amount of stress and thereby the desired dispersion compensation by controlling the voltage applied to the piezoelectric device; and securing the photoelastic medium to the piezoelectric device and passing an optical signal through the photoelastic medium (Figs 1-4 and paragraphs 3, 8, 10, 12, 41, 42, 45, 47, 50-52).

Chien also discloses a method comprising: securing a photoelastic medium to a piezoelectric device; applying a tunable voltage to the piezoelectric device to induce a stress in the photoelastic medium appropriate to tunably correct dispersion generated in an optical system coupled to the photoelastic medium; and controlling the voltage applied to the piezoelectric device to generate a dispersion of substantially the same magnitude and an opposite polarity of the dispersion generated in the optical system (Figs 1-4, and paragraphs 3, 8-10, 12, 41, 42, 45, 47, 50-52). The dispersion compensation is tuned

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based on the voltage level. The voltage is tuned based on the amount of dispersion detected in the medium (see paragraphs 50-52).

6. Regarding claims 9-15, Chien discloses an optical system (400) comprising: an optical medium (305) defining an optical path; a photoelastic material in the optical path; devices (piezoelectric actuators) (307 or 402) that tunably stress the photoelastic medium to generate a dispersion of an appropriate polarity and magnitude to correct a dispersion inducted in the optical medium, the piezoelectric actuators are coupled/secured to the photosensitive medium to provide a tunable magnitude and polarity of dispersion to cancel dispersion generated along the optical path by the optical medium (Figs 1-4; and paragraphs 3, 8-10, 12, 41, 42, 45, 47, 50-52). The piezoelectric actuators tunably apply stress so as to tunably control the varying levels of dispersion in the medium (see specifically, paragraphs 50-52).

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

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advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derek L. Dupuis whose telephone number is (571) 272-3101. The examiner can normally be reached on Monday - Friday 8:30am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Derek L. Dupuis
Group Art Unit 2883



**KAVEH KIANNI
PRIMARY EXAMINER**